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DEFENSE ORGANIZATION

Advantages and Disadvantages of a Centralized Civilian Acquisition Agency

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To the President of the Senate and the
Speaker of the House of Representatives

The Department of Defense Authorization Act of 1986 (Public Law 99-145, Nov. 8, 1985; sec. 953) required that we review all available reports and analyses of the organizational structure for defense procurement and report on the advantages and disadvantages of establishing a Centralized Civilian Acquisition Agency to be placed either inside or outside the Department of Defense (DOD). The mission of this proposed agency would be to coordinate, supervise, direct, and perform all procurement functions for the Department. We were to provide a factual report with no recommendations.

Our study was structured to surface the most commonly recognized acquisition problems and to identify the advantages and disadvantages of establishing a centralized civilian agency. We sought the views of DOD officials, both civilian and military, involved in the acquisition process; individuals in the defense industry; and obtained written comments from defense experts. In addition, we reviewed studies and analyses addressing DOD's organizational structure and the acquisition process. A detailed discussion of the advantages and disadvantages is in appendix I. Appendix II contains our objectives, scope, and methodology and appendix III lists the studies reviewed.

The major acquisition problems most often described were: (1) inadequate requirements identification, (2) program instability, and (3) a lack of uniform policy implementation.

The predominant views expressed were against establishing the Agency. Most believed that any advantages offered would be more than offset by the disadvantages.

Some of the more significant advantages offered were:

- Reducing service parochialism thereby creating an environment for more common/joint system development.
- Improving the quality and continuity of the acquisition work force.
- Reducing the acquisition work force and administrative layers by consolidating duplicative and overlapping acquisition functions.

Some of the more significant disadvantages offered were:

- Acquisition problems were not necessarily organizationally related and no single action, such as establishing a centralized civilian agency, would solve them.
- The military's operational experience, which lends credibility that new equipment is operationally suitable and effective for military use, may not be available if a purely civilianized organization were established.
- The potentially large size of the Agency work force and organization would create an unusual management challenge; it could be unmanageable.

From our research of the literature and through discussions with many knowledgeable DOD policy and program level officials, as well as with outside observers, certain overall themes began to emerge, some of which were not directly related to the advantages/disadvantages issue. They include the following:

- Many studies and analyses have been done on defense organizations and the acquisition system. However, very few addressed the concept of a civilian acquisition agency, and none of those provided an indepth analysis of the concept.
- While our study examined only one model for organizational change, a centralized civilian agency, there are other less radical changes that could be made, some of which were recommended by the Packard Commission[1] and are currently being implemented by DOD.
- Many of those interviewed cautioned that acquisition system problems to be solved and benefits to be derived should be clearly identified before any major change is made to the acquisition process.
- Many of the key problems associated with weapons acquisition are not organizational and would not be solved by either the Agency or the current system. The requirements process is the key issue because of its impact on system duplication, lack of commonality for interoperability and logistic support, and the proliferation of new system starts, which in turn cause major problems in program stability.
- Other problems such as uniform policies and procedures, work force quality and stability and funding stability within DOD, can be addressed without centralized organizational restructuring.
- The size of the Agency could be prohibitive in terms of effective management. Although acquisition systems of our major allied nations are managed by small centralized organizations, their acquisition programs are small compared to those of the United States. Further, according to a

[1] A Quest for Excellence: Final Report to the President, the President's Blue Ribbon Commission on Defense Management, June 1986.

Rand Corporation study[2] our allies may not be as successful in developing and fielding weapons systems as the United States.

- Regardless of the change made to improve the acquisition process, the success is dependent upon the quality of the acquisition work force such as training and experience of the personnel.
- An acquisition organization that consists of both military and civilian personnel was generally considered best by those we interviewed. Such an organization would possess the best attributes of both the military's operational experience and the civilian's business knowledge as well as work force continuity.
- There was an overwhelming opinion that the Secretary of Defense should be accountable for the resources needed for defense; to remove this responsibility would reduce the Secretary's accountability for and control over defense. Therefore, if the Agency were established it should be located in DOD.

We are sending copies of this report to the Secretaries of Defense, the Army, Navy, and Air Force, as well as to other interested parties.

for Frank C Conahan

Charles A. Bowsher
Comptroller General
of the United States

[2]Improving the Military Acquisition Process, Lessons Learned from Rand Research, by Michael Rich and Edmund Dews, with C.L. Batten, Jr. (R-3373-AF/RC), Feb. 1986.

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Abbreviations

CCAA	Centralized Civilian Acquisition Agency
DOD	Department of Defense
GAO	General Accounting Office

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A Perspective on the Potential Impact of a Centralized Civilian Acquisition Agency

The concept of a centralized civilian operated weapons systems acquisition agency was considered during both the First and Second World Wars. However, all proposals for such an agency were rejected. The dominant concern then was to meet the imminent threat of war without incurring the risks associated with sweeping organizational changes.

In 1985 the Chairman of the Senate Committee on Governmental Affairs introduced legislation[1] that would consolidate within DOD all the "major procurement activities." The bill provides that the legislation would create a civilian director of major weapon systems acquisitions to (1) reduce conflicts, overlapping activities, and duplication among the military services in the development and procurement of weapon systems, (2) improve the professionalism, expertise, training, and experience of the civilian acquisition work force, (3) allow the Armed Forces to concentrate on their "military functions," (4) ensure that acquisition managers and support personnel are held accountable for the success or failure of weapon programs, (5) increase the efficiency and effectiveness of the acquisition process, and (6) reduce cost growth, acquisition schedule delays, and quality deficiencies which affect weapon programs.

The Authorization Committees have not held hearings on this proposal; however, the DOD Authorization Act of 1986 (Public Law 99-145, Nov. 8, 1985; sec. 953) required that we review all available reports and analyses of the organization structure for defense procurement. We were to provide a factual report on the advantages and disadvantages of establishing a Centralized Civilian Acquisition Agency (CCAA) without making recommendations.

The most common acquisition problems identified to us were (1) inadequate requirements identification, (2) program instability, and (3) a lack of uniform policy implementation. We discussed these problems during our interviews to determine whether a CCAA may be able to solve them. Table I.1 summarizes the potential impact in the form of advantages and disadvantages that a CCAA could have on acquisition system problems.

We are presenting the advantages and disadvantages of a CCAA to provide a balanced view of the pros and cons of establishing a CCAA. However, it should be noted that the predominant views expressed were against establishing such an agency. Many believed that while a CCAA

[1]S.941: Weapon Systems Acquisitions Improvement and Reform Act of 1985.

offers advantages, these would be more than offset by the disadvantages.

Table I.1: The Potential Impact of a CCAA

Potential Advantages	
Create a better trained corps of acquisition professionals	Reduce unnecessary turnover through rotational assignments of key personnel, thereby providing continuity to a weapon program
Reduce the acquisition work force and administrative layering	Increase early coordination and collaboration among the services in the requirements formulation phase of a weapon program
Reduce the logistic and supportability requirements by promoting the development of more common weapon systems and components	Improve relations with the Congress by providing a single organization which could foster more uniformity and accountability
Establish more uniform implementation of procurement policy among the services, as well as with multidivisional defense contractors	
Potential Disadvantages	
Reduce the military's influence in providing their perspective on combat tactics and operations	Create difficulties in finding sufficient numbers of technically knowledgeable civilian personnel at the government pay rates
Make it more difficult to dismiss or reassign marginally qualified civilians in leadership positions	Complicate and delay decision making by simply adding another layer of review at the headquarters level
Leave unresolved the (1) problem of "what" weapon systems to buy, which can be a more difficult question than "how" to buy and (2) problems associated with program funding instabilities	Increase the number of government personnel because the services may have to retain a variety of staff to monitor the agency
	Create a severe management challenge because of the large size of the agency

The first portion of this appendix provides a more detailed discussion of the potential effects of a CCAA on the requirements determination process, weapon program stability, and procurement policies and procedures. The remainder of the appendix discusses the CCAA in terms of civilian versus military control, placement inside or outside DOD, and the potential size of a CCAA. Finally, a list of essential factors is included that should be considered when any organizational change is proposed.

What Will Be CCAA's Impact on the Requirements Determination Process?

Prevalent views on the impact of a CCAA on the requirements determination process centered around the following beliefs:

- A CCAA could be advantageous because overlaps in service mission responsibilities and weapon needs could be easier to sort out and control, enhancing the development of common weapon systems.
- A CCAA would not solve the problem of what weapon systems to buy, which is a more difficult question than how to buy a weapon system.

The military departments have been criticized for working against common system development, because each service develops systems independent of one another. Studies state that this leads to unnecessary and undesirable duplication as well as more programs under development than can be afforded.

A 1985 Defense Science Board Study[2] found that the military service's process of translating military needs into requirements to satisfy those needs has problems. The study found that the process is too rigid, lacks adequate involvement of all participants (users, acquirers, and producers), and lacks continuing review and evaluation of operational requirements with respect to affordability, performance, and risk. The study said that requirements have driven costs up to the point that the number of systems fielded is too small to be effective, or that systems take so long to develop they no longer meet the threat when they are fielded.

No single action, including a CCAA, was cited in the literature, by those we interviewed, or by those we received comments from as a solution to these problems. Rather, a multitude of actions was given as necessary, including:

- a strong central and coordinated focus to exploit and integrate the needs of the military services and eliminate unnecessary and undesirable duplication of systems,
- continuous evaluation of operational requirements with respect to cost/capability trade-offs throughout weapon system development, and
- more involvement of users in formulating operational requirements.

[2]Requirements Generation, Iteration and Implementation, Final Report of the 1985 Defense Science Board Summer Study on Practical Functional Performance Requirements, Dec. 1985.

Studies Stated a Strong Central Focus on Requirements Is Needed

To improve the military's acquisition process, the Rand Corporation study[3] recently stated that a strong, central, and coordinated focus is needed to exploit and integrate the unique capabilities of each military service, eliminate unnecessary and undesirable duplication, and ensure common analytic approaches for dealing with a common threat. According to Rand, initiatives emphasizing cross-service mission area planning, such as the Joint Requirements and Management Board—also recommended by the President's Commission on Defense Management (Packard Commission)[4]—should be intensified. The Rand study concluded, however, that a single DOD agency (i.e., CCAA) to perform all research, development, and other acquisition functions was not the best solution. The study stated that some aspects of acquisition would benefit from centralization; but overall, it may be counterproductive.

The study also points out that even though most European nations have a single agency acquiring weapons systems for their armed services, the weapons they produce are generally less satisfactory than those produced in the United States. Rand stated that a better approach to improving U.S. weapons acquisition was to increase the early coordination and collaboration among the services in the requirements formulation phase (with the Office of the Secretary of Defense, the organization of the Joint Chiefs of Staff, and the commanders of major operational commands playing a heightened role).

The Packard Commission has also stated that a better job of determining requirements is needed at the outset of weapons development. In this regard the Commission recommended that the Joint Requirements and Management Board play an active role in all joint as well as in appropriate service programs by defining weapons requirements, selecting programs for development, and providing early trade-offs between cost and performance.

CCAA and Common System Development

A CCAA could have a positive effect on common systems development. Officials we interviewed said that if a CCAA were created, common weapons systems hardware could more often be developed and procured. They agreed that a CCAA might promote greater commonality among electronic components, such as radios and avionics. Greater use

[3]Improving the Military Acquisition Process, Lessons Learned from Rand Research, by Michael Rich and Edmund Dews, with C.L. Batten, Jr. (R-3373-AF/RC), Feb. 1986.

[4]A Quest for Excellence Final Report to the President, the President's Blue Ribbon Commission on Defense Management, June 1986.

of common components, some thought, could reduce logistic and supportability requirements which could result in cost savings and increased operational efficiencies. Further, the use of common radios might result in better communication among forces.

However, because different operational needs often demand service specific hardware, some of the officials did not believe that a CCAA could lead to greater commonality among major weapons. For example, the Navy's aircraft must tolerate takeoffs and landings from carrier decks, which is not characteristic of the other services. Also, commonality is not always beneficial because different systems can complicate the enemy's ability to counter a threat. The prevailing view was that different missions or operating environments caused the lack of commonality and that a CCAA would not enhance weapon system commonality.

What Will Be CCAA's Impact on Weapon Program Stability?

Most of the officials we interviewed believed that a CCAA would not improve program stability because stability is greatly dependent on external influences beyond the control of the military's acquisition process and independent of the organizational structure. Many officials pointed out that weapon systems acquisition programs are unstable because of shifting funding levels, lengthening production schedules, corresponding decreases in quantities produced, and rapidly changing design specifications.

The Center for Strategic and International Studies reported[5] that three major factors cause program turbulence:

- Annual congressional review of hundreds of procurement and research and development line items produce year-to-year uncertainties for program managers and defense contractors.
- Too many new program starts. DOD systematically underestimates the cost of new weapon programs. At the same time, DOD's 5-year plan is consistently optimistic regarding the aggregate spending levels the Congress will later approve.
- Frequent revisions of technical requirements drive weapon programs either to incorporate new advances in technology or to account for current threat assessments of potential adversaries' capabilities. Constant design revisions contribute to higher unit costs, slow development and

[5]Toward a More Effective Defense, the Final Report of the Center for Strategic and International Studies (Georgetown University, Feb. 1985).

production schedules, as well as reduce system reliability and operability.

Several studies, as well as many of the individuals we interviewed, said that to enhance program stability DOD should institutionalize "baselining" for major weapon systems. Baselining is the establishment of an internal military service agreement, describing functional characteristics, cost, schedule, and other factors critical to the program's success. Any deviation from the established baselines must be approved. They also recommended that DOD should expand the use of multiyear procurement for high priority programs. Further, several studies concluded that a biennial budget would introduce greater stability to weapon programs by reducing the year-to-year uncertainty and establish more efficient production rates with correspondingly lower unit costs.

We recently reported[6] that the current acquisition climate does not offer the necessary program stability. In our study, we reviewed the acquisition strategies and associated contracting plans for 17 weapon programs and reported that practically all were influenced by factors outside the control of program offices. External influences can include such things as unstable agency commitments or unstable basic requirements, as well as insufficient up-front funding, which are factors beyond the control of the weapon program manager and independent of the organizational structure.

Several of the officials we interviewed were concerned that creation of a CCAA with its attendant reorganization would cause considerable turbulence in the acquisition system. This turbulence could extend for 10 years or more. Officials also believed that if a change were made the current programs under development would be disrupted, causing further instability and resulting in needed systems not being fielded.

What Will Be CCAA's Impact on Procurement Policies and Procedures?

Most of the officials told us that a CCAA might create more uniformity in implementing acquisition policies and procedures among the services. For example, it was stated that debarment and suspension rules could more evenly be applied and fairer judgments rendered. We were also told that multidivisional defense contractors' business practices could be better coordinated because contractors would be dealing with one acquisition agency instead of many as they now do. Therefore, government

[6]DOD Acquisition: Strengthening Capabilities of Key Personnel in Systems Acquisition (GAO/NSIAD-86-45, May 1986).

acquisition policies could be more uniformly implemented. This positive impact would be particularly true if a CCAA were to clarify and simplify the services complex network of regulations and directives. Further, we were told that a CCAA might reduce the contradictory signals and administrative confusion that sometimes result from duplication and overlapping functions.

Conversely, other officials believed that uniform procurement practices and common contract administration may not necessarily be advantageous. In certain instances, diverse and flexible procurement practices and contract administration techniques allow for adapting to different and evolving circumstances. Further, a decentralized organization provides inherent checks and balances that can compensate for poor leadership or inappropriate policy. This would be lost if a CCAA were created.

Civilian Versus Military Control of the Acquisition Process

The overall concern about a completely civilian organization was that it could separate the system user[7] from the acquisition process, and increase the chances of acquiring equipment unresponsive to military needs. Military acquisition personnel often stated that their combat experience lends credibility that new equipment will be operationally suitable and effective. Civilians in the acquisition process also felt that the military's operational experience was valuable.

The Congressional Research Service reported[8] that repeated efforts during the last 20 years to reform the acquisition process have focused on improving procedures rather than organization. No Secretary of Defense (from McNamara to Weinberger) has challenged the long-standing tradition that assigns primary responsibilities for the day-to-day management of major systems acquisition to the military services.

The Congressional Research Service concluded that no major U.S. ally has an acquisition system that assigns so dominant a role to the military departments as the United States. They assign management responsibility for weapons production to civilian-managed agencies. The report stated that in the United States

[7]For the purpose of our study, "user" was considered the operational combat forces who will use the equipment when it is developed.

[8]U.S. Weapons Procurement: Should a Civilian Agency Be in Charge? (CRS, Report No. 84-61F, June 13, 1984).

"putting civilians totally in charge of weapons systems acquisition is untried and probably too radical an alternative to win much support from advocates of procurement reform. . ."

Would a CCAA Foster More Objectivity in Final Product Acceptance?

An advantage of a CCAA would be that removing the uniformed services from the acquisition process could allow for more objectivity in deciding whether to accept military hardware developed by this separate, civilian acquisition entity. The military services could continue to perform operational testing on a weapon system developed by a CCAA to determine if it would meet operational requirements. In other words, the military might cease to be program advocates, which could result in a greater likelihood that the military reject ineffective hardware. Officials felt that with a CCAA, a distinctly arms-length, possibly adversarial relationship might be created between the user and the developer and could result in the development and deployment of better weapon systems.

Others felt that removing the military would increase the likelihood of developing systems that did not meet operational needs. This would result because the military personnel's operational experience and expertise may not be available.

Would a CCAA Improve the Quality of the Work Force?

Several defense experts commenting on this concept expressed the view that a CCAA might provide a better trained corps of middle-level acquisition professionals. A cadre of "seasoned" civilian professionals could be developed who could be more accountable for a weapon program's success or failure. They believed that a CCAA could create a genuine career field, reduce unnecessary turnover in assignments, establish more uniform training and experience qualifications for positions, and provide better continuing education.

In 1983, the National Academy of Public Administration[9] stated that the civilian work force was "overloaded, untrained, and inexperienced." In our recent study of key personnel in systems acquisition, we also found that program managers and contracting officers lacked experience and education.

The Packard Commission reported that the success of any acquisition reform is directly related to the quality of the acquisition work force. We were told that it might be difficult to find and maintain sufficient

[9]Revitalizing Federal Management: Managers and Their Overburned Systems, Interim Report.

numbers of technically knowledgeable, highly motivated civilian personnel to support a CCAA at the government pay rate. Officials believed that the defense industry would attract the better, more experienced employees away from the acquisition agency by offering greater compensation. This could negate some of the positive effects achieved from creating a civilian agency.

Could a CCAA Stabilize the Acquisition Work Force?

Several officials commented that civilians can be less transient and therefore bring more stability to the acquisition work force, because they are not subject to frequent reassignments. An exception might be a civilian political appointee who typically serves in high-level positions, with relatively short tenure. The Packard Commission found that there is a great amount of turnover in the civilian work force presently.

It was noted by several military officers that more stability in the acquisition work force may not be all positive, because it could cause stagnation and less creativity. Highly mobile military officers believe that their broad experience (i.e., military strategy formulation, contingency planning, and combat experience) benefits the acquisition process. However, we were also told that accountability can be lost with the short tenure of military program managers because of the "it didn't happen on my watch" syndrome.

Could a CCAA Reduce the Acquisition Work Force?

We were told that establishing a CCAA may lead to some reductions in personnel by eliminating redundancy and overlap among and within the military services. On the other hand, we were also told that the military services may need to retain staff to monitor the systems being developed and to perform functions such as research and engineering to assist in the requirements process.

If a CCAA were created, the greatest impact would be on the military services' buying commands because they are responsible for developing and procuring most of what DOD buys. (See page 16 for a discussion of the potential size of a CCAA.) The opinion was expressed that over the years, when the military departments responsibilities were reduced by establishing centralized defense agencies (involved with audit, logistics, intelligence, and mapping), a capability to perform each function was still retained. Thus, the objectives of consolidation or elimination were not fully achieved.

Maintaining a Mix of Civilian and Military Personnel

Another issue brought up during our discussions centered on maintaining a mix of civilian and military personnel in the acquisition organization. The military services' resistance to a centralized acquisition organization could be reduced if the new entity included both military and civilians. We often heard during our interviews, from both military and civilians, that the military make a valuable contribution because they provide a perspective on combat tactics and operations.

However, an issue mentioned was whether civilians were being placed in the proper number of leadership positions within the military buying commands. Several officials asserted that civilians were well qualified but did not hold a sufficient number of positions of authority, such as program managers. Many believed civilians could and should hold more leadership positions.

We were told that placing military officers in leadership positions is currently more acceptable because the services can communicate better among themselves. The operational commands can communicate with the military program manager and are then more assured that the systems being developed will meet operational needs. Further, several officials stated that the civilian worker may not have the sense of urgency that the military has since the military is the ultimate user.

Views on Placing a CCAA Either Inside or Outside DOD

We were told that placing a CCAA within DOD would make it easier to ensure close contact with the using and supporting commands. Also, placing a CCAA within DOD would leave the responsibility for our national defense with the Secretary of Defense, thus better assuring responsiveness to defense needs. Without maintaining accountability for system acquisition, the military's responsibility for countering a threat to our national security may be reduced. An overwhelming opinion was expressed that the Secretary of Defense should be accountable for the quality, cost, and timeliness of the resources needed for defense. To remove this responsibility would substantially reduce the Secretary's accountability for and control over defense.

Some of the individuals interviewed believed that placing a CCAA outside DOD could place an additional bureaucratic barrier between the users of a weapon system and the personnel responsible for acquiring the system. Some also felt that an agency outside DOD would be more susceptible to interference from outside sources.

Although we found general opposition to the idea of placing a CCAA outside DOD, it was recognized that this organizational arrangement could improve relationships with the Congress as well as with the press because it would give one face with which to deal and would foster uniformity and accountability.

Potential Size of a CCAA

One of the major concerns expressed about creating a CCAA was the potential size of the organization. We were told that the tremendous size of the acquisition organization and its work force could create an unmanageable challenge.

U.S. defense acquisition has been described as the largest business enterprise in the world. Annual purchases total almost $170 billion—more than the combined purchases of General Motors, EXXON, and IBM. It involves almost 15 million separate contract actions per year—an average of 56,000 contract actions every working day.

The acquisition process consists of numerous interactive functions. These include research, engineering, development, operational and logistical support (which includes spares, maintenance, repair items, and local base support services), test and evaluation, production, and deployment. All of these functions have the universal purpose of providing the military user with a needed system and support to the system once it is fielded. Approximately 539,000 civilian and military personnel are involved in performing these functions in DOD.

Composition of the Acquisition Work Force

The acquisition work force will vary in size depending on the occupational fields that are included in the reorganization. In looking at the potential size of the work force we have considered all the occupational fields, including scientific and engineering professionals, managers and administrators, technical, clerical and service personnel, and craftsman and laborers for eight selected buying commands. These commands are responsible for acquiring, maintaining, and supporting weapon systems.

As shown in table I.2, the total work force of approximately 539,000 civilian and military personnel includes occupational fields that are not directly related to the acquisition process. For example, the 137,700 "Craftsman, Mechanics, and Production Workers" are not considered as part of the work force directly related to the acquisition process, but many of them could in fact provide indirect support to the process. A CCAA would not include all of these types of occupations.

The table also shows that the military does not dominate any given field, other than the "Military-unique personnel." The loss of the military if a CCAA were established, would most directly affect the "Service personnel" and "other professionals" occupational fields because approximately 25 percent of the work force in those specialties are military.

Table I.2: Approximate Work Force by Occupational Field

Occupational field	Military work force	Percent	Civilian work force	Percent	Total work force
Scientific and engineering professionals (including physical sciences and engineers)	2,500	5	45,700	95	**48,200**
Other professionals (including mathematicians, legal, medical, and public affairs)	2,900	27	8,000	73	**10,900**
Managers and administrators (including financial, research and development, logistics, procurement, and contract)	11,100	15	60,800	85	**71,900**
Technical personnel (including engineering, financial, ADP[a] programmers, legal, medical, personnel, and logistics)	11,500	11	93,000	89	**104,500**
Clerical personnel (including financial, ADP operators, legal, medical, logistics, and secretaries)	4,200	5	82,500	95	**86,700**
Service personnel (including law enforcement, fire protection, and food service)	3,800	27	10,500	73	**14,300**
Craftsmen, mechanics, and production workers (including machinists, electricians, vehicle repair, aircraft repair, and electronic equipment repair)	13,700	10	124,000	90	**137,700**
Operators and laborers (including materiel handlers, vehicle operators, and installation maintenance)	2,700	5	52,600	95	**55,300**
Military-unique personnel (including artillery and combat operations planning)	1,300	100	0	0	**1,300**
Other personnel (including trainees)	200	3	5,900	97	**6,100**
Undetermined occupation (occupations not identified)	2,400	96	100	4	**2,500**
Total[b]	**56,300**	**10**	**483,100**	**90**	**539,400**

[a]Automated Data Processing.

[b]Totals do not agree with table I.3 due to differences in rounding.

Sources: Defense Manpower Data Center
Defense Logistics Agency
Naval Military Personnel Command

Table 1.3 illustrates the approximate size of the total work force by military departments. Even though not all of the approximately 56,000

military personnel are in occupational fields directly related to the acquisition process, many of them, such as engineers and procurement and contract administrators, would be subject to displacement if a CCAA were created. The Air Force Systems Command would be most directly affected because the work force consists of about 50 percent military personnel. The other buying commands are predominantly civilian, except that the military holds many of the top leadership positions.

Table I.3: Approximate Work Force for Selected Military Buying Commands (As of March 1986)

	Military	Percent	Civilian	Percent	Total
Air Force:					
Air Force Logistics	11,900	11	93,200	89	**105,100**
Air Force Systems	29,300	50	29,500	50	**58,800**
Army:					
Army Materiel	10,400	8	117,800	92	**128,200**
DOD:					
Defense Logistics Agency	1,000	2	53,000	98	**54,000**
Navy:					
Naval Air Systems	1,100	2	46,400	98	**47,500**
Naval Supply Systems	700	2	28,300	98	**29,000**
Naval Sea Systems	1,500	1	110,500	99	**112,000**
Space and Naval Warfare Systems	300	7	4,200	93	**4,500**
Total	**56,200**	**10**	**482,900**	**90**	**539,100**

Sources: Defense Manpower Data Center
Defense Logistics Agency
Naval Military Personnel Command

We were told that removing the military from the buying commands would cause the greatest impact to officers in key leadership positions (i.e., program managers). Navy personnel expressed concern about losing acquisition positions because it would significantly reduce the available positions ashore. Loss of these positions would increase the likelihood that Navy officer and enlisted personnel would spend more time at sea. This could have an adverse impact on morale.

Several defense experts stated that the potential size in terms of dollars and manpower may be a major disadvantage to creating a CCAA. They felt that concentrating such enormous power into one centralized organization could remove the checks and balances that exist in the current decentralized organizational arrangement.

Comparison of U.S. Acquisition System With Major Allied Nation's Systems

Several of our major allied nations[10] weapon system acquisition functions are performed by centralized agencies that are separate from the military. These countries' acquisition systems are sometimes used to illustrate that a separate centralized acquisition system will work. However, when comparing the United States and allied nation's systems, several significant differences should be considered.

The annual defense budget of the United States ($293 billion) is considerably higher than those of France ($16.7 billion), West Germany ($16.3 billion), or the United Kingdom ($23.5 billion). DOD's research and development expenditures are 15 times those of either France, West Germany, or the United Kingdom, again illustrating the relative size of U.S. expenditures.

The environment in which these other countries' acquisition agencies operate is significantly different from that of the United States'. These variations are in terms of (1) the size of the industrial base, (2) the degree of control over the industrial base, and (3) the degree of legislative oversight.

The size of the defense industrial base is considerably larger in the United States than in the other countries, and the extent of government ownership or control varies among the countries. In the United States and West Germany, defense firms are privately owned, whereas in France and the United Kingdom, there is a mixture of state and private ownership.

In each country, the legislature exercises varying degrees of oversight. In the United States, the Congress performs line-item review of the defense budget and is much more involved in defense oversight. In France and the United Kingdom, the Parliament approves the total budget but there is no line-item review. In West Germany the Parliament performs selective line-item review. These factors, as well as the size of the defense budget, influence the acquisition process of a country.

[10]Source for most of this information is Weapons Acquisition, Processes of Selected Foreign Governments (GAO/NSIAD-86-51FS).

Essential Factors to Consider When Making Organizational Change

Our discussions with the individuals involved in defense acquisition and defense experts, as well as our literature review identified a number of essential factors that should be considered when organizational change is made. The factors are:

- the acquisition system problems which will be solved by the change should be specifically identified;
- the overall organization pyramid should be streamlined;
- the span of control of top management should be limited to a few key individuals to ensure manageability;
- clear distinct authority and responsibility below top management should be established; and
- unnecessary layering of staffs and overlapping fragmentation, and redundancy should be eliminated.

Objectives, Scope, and Methodology

Section 953 of the DOD Authorization Act of 1986 (Public Law 99-145, Nov. 8, 1985) required us to review all available reports and analyses of the organizational structure for defense procurement and report on the advantages and disadvantages of creating a CCAA, which would coordinate, supervise, direct, and perform all DOD procurement functions. The objectives of this review were to identify the advantages and disadvantages of establishing a CCAA. We did not make recommendations.

In response to this mandate, we reviewed 25 studies and numerous articles, periodicals, and books dealing with the defense organization and the acquisition process. Appendix III lists the studies. We determined what those studies identified as commonly recognized acquisition system problems and what they concluded about organizational changes to the acquisition process. Further, to identify acquisition system problems and the advantages and disadvantages of a CCAA, we interviewed industry and DOD officials. We solicited the names of experts from various organizations concerned with DOD. We discussed acquisition issues, including the merits of a CCAA, with experts and synopsized the results.

In all, we conducted over 100 interviews. Our interviewees and experts covered a cross-section of the acquisition community, including: former Assistant Secretaries of Defense, retired military and civilian personnel, congressional staffers, defense analysts, current military and civilian acquisition personnel, and personnel from defense industry and think tanks.

At DOD, we did our work in the Office of the Secretary of Defense and at the four military services, the Army, Navy, Air Force, and Marine Corps. We interviewed those responsible for acquisition policy, acquisition management, contracting, logistics, and weapon system program management. We performed our work between January and September 1986.

To facilitate discussion, we defined a CCAA as an agency derived from the consolidation of the eight military buying commands. These commands have responsibility for research and development, procurement, maintenance, and support of weapon systems as well as test and evaluation. Under the proposed CCAA, the work force would be entirely civilian and would be responsible for fulfilling the missions of the buying command.

Studies Reviewed

A Quest for Excellence: Final Report to the President, The President's Blue Ribbon Commission on Defense Management, June 1986.

DOD Acquisition: Strengthening Capabilities of Key Personnel in Systems Acquisition (GAO/NSIAD-86-45, May 1986).

Improving the Military Acquisition Process, Lessons Learned from Rand Research, by Michael Rich and Edmund Dews with C. L. Batten, Jr. (R-3373-AF/RC, Feb. 1986).

Weapons Acquisition: Processes of Selected Foreign Governments (GAO/NSIAD-86-51FS, Feb. 1986).

Requirements Generation, Iteration and Implementation, Final Report of the 1985 Defense Science Board Summer Study on Practical Functional Performance Requirements, Dec. 1985.

DOD Acquisition Improvement—The Challenges Ahead, Perspectives of the Assistant Secretary of Defense for Acquisition and Logistics, Nov. 1985.

Defense Organization: The Need for Change, Staff Report to the Committee on Armed Services, United States Senate (S. Report No. 99-86, Oct. 16, 1985).

Toward a More Effective Defense: The Final Report of the Center for Strategic and International Studies, Georgetown University, Feb. 1985.

Military Procurement Procedures of Foreign Governments: Centralization of the Procurement Function (CRS, Report No. 84-229F, Dec. 11, 1984).

U. S. Weapons Procurement: Should a Civilian Agency Be in Charge? (CRS, Report No. 84-61F, June 13, 1984).

DOD Needs to Provide More Credible Weapon Systems Cost Estimates to the Congress (GAO/NSIAD-84-70, May 24, 1984).

Defense Acquisition Improvement Program, Third Annual Report, Apr. 1984.

The Pentagon and the Art of War, Edward N. Luttwak, 1984.

Joint Major System Acquisition by the Military Services: An Elusive Strategy (GAO/NSIAD-84-22, Dec. 23, 1983).

Report of the Defense Science Board Task Force on Transition of Weapons Systems from Development to Production, Office of the Under Secretary of Defense, Research and Engineering, Aug. 1983.

President's Private Sector Survey on Cost Control, Report on the Office of the Secretary of Defense, Spring-Fall 1983.

Reappraising Defense Organization: An Analysis Based on the Defense Organization Study of 1977-1980, Archie D. Barrett, 1983.

An Analysis of Weapon System Acquisition Intervals, Past and Present, by G. K. Smith and E. T. Friedmann (R-2605-DR&E/AF, Nov. 1980).

A Report to the Secretary of Defense on the Defense Organization Study, June 30, 1979.

DOD Reorganization Study Project, Departmental Headquarters Study, A report to the Secretary of Defense, June 1, 1978.

Suggested Improvements in Staffing and Organization of Top Management Headquarters in the DOD (GAO/FPCD-76-35, Apr. 20, 1976).

The Role of Congress in the DOD Reorganization Act of 1958 (CRS, Report No. 75-161F, June 2, 1975).

Arming America: How the U. S. Buys Weapons, J. Ronald Fox, 1974.

Report to the President and the Secretary of Defense on the DOD, by the Blue Ribbon Defense Panel, July 1, 1970.

GAO Note: In addition to the studies and analyses listed here we also reviewed numerous articles, periodicals, and books which addressed the acquisition system, process, and organization.

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